

Project Lead The Way (PLTW) – Introduction to Computer Science (ICS) 2016-2017 STEM Scale-Up Program

Overview: Funding will assist Iowa high schools in implementing or expanding upon the PLTW Introduction to Computer Science (ICS) course. Awardees are expected to send at least one educator to PLTW ICS Core Training—for which tuition, meals and lodging are allowable expenses, as well as the PLTW Computer Science participation fee and any required ICS equipment and supplies—including Android tablets and computers (laptop or desktop).

Grade Levels: 9-12

Program Summary

[Project Lead The Way \(PLTW\)](#) is a nonprofit organization providing transformative learning experiences for K-12 students and teachers across the U.S. PLTW empowers students to develop in-demand, transportable knowledge and skills through K-12 program pathways that include [PLTW Launch](#) (K-5), [PLTW Gateway](#) (6-8), and high school programs: [PLTW Biomedical Science](#), [PLTW Engineering](#) and [PLTW Computer Science](#). PLTW's teacher training and ongoing support mechanisms allows teachers to engage their students in real-world learning in schools in all 50 states and the District of Columbia.

Program Objectives and Description

Designed for students who have never programmed before, ICS is an optional starting point for the PLTW Computer Science program. Students work in teams to create apps for mobile devices using MIT App Inventor®. They explore the impact of computing in society and build skills in digital citizenship and cybersecurity. Beyond learning the fundamentals of programming, students build computational thinking skills by applying computer science to collaboration tools, modeling and simulation and data analysis. In addition, students transfer the understanding of programming gained in App Inventor to text-based programming in Python® and apply their knowledge to create algorithms for games of chance and strategy.

What does the program provide to the educator?

Selected schools will be granted a \$12,000 award to help support the implementation of a new, or expansion of an existing, PLTW ICS course. Allowable expenses include: PLTW Computer Science participation fee (\$2,000), tuition, meals and lodging expenses for the one-week PLTW ICS Core Training (~\$1700 per teacher) and any ICS equipment and supplies from the PLTW Computer Science Inventory Workbook, including Android tablets and computers. Once schools have registered and have signed the standard award agreement, PLTW will disburse payment beginning in July 2016.

What is required by the educator in order to implement this program?

- Review the [Register for PLTW](#) webpage and select a [District Administrator](#) (DA).
- If not already registered, DA begins registration for the school district and/or participating schools by completing the online registration form. PLTW will then contact the DA with further instructions. *Registration does not commit the school district to PLTW implementation.*
- Review the PLTW agreement (*coming soon*) with the school board, superintendent, and legal department to ensure all parties are aware of district and school responsibilities.
- Execute LEA Agreement with PLTW and submit W-9 to PLTW as a requirement of the Scale-Up.
- Select a teacher to instruct the PLTW ICS course and add teacher to PLTW database. Teachers should be excited to teach a project-based curriculum and meet the requirements of the PLTW agreement.
- Once added to database, [register teacher for PLTW ICS Core Training](#) hosted at the [The University of Iowa College of Engineering](#) or [Iowa State University College of Engineering](#) by July 1, 2016. Teachers must successfully complete all required online PLTW ICS Readiness Training modules prior to attending Core Training, of which they must successfully complete and pass.
- Purchase necessary equipment and supplies, including [Android tablets and computers](#) from the [PLTW Computer Science ICS Purchasing Manual](#).
- Each awarded school will be required to: **Roster all PLTW students, offer End of Course Assessments and Submit end of calendar year reporting**, including submission of receipts and full allocation of funds for allowable expenses.

Standards Alignment: [PLTW Computer Science: ICS Standards Alignment](#)

Program Video: PLTW Overview: <https://www.youtube.com/watch?v=al65aeTBKNE>